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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,190	08/28/2001	Kuniyuki Miura	325772024500	3526

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EXAMINER	
HA, NGUYEN Q	
ART UNIT	**PAPER NUMBER**
2854	
MAIL DATE	**DELIVERY MODE**
03/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/940,190	MIURA ET AL.	
	Examiner	Art Unit	
	'Wynn' Q. HA	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) *2,3,7,9,10,14,21,22 and 26* is/are withdrawn from consideration.

5)☐ Claim(s) _ is/are allowed.

6)☒ Claim(s) *1,4-6,8,11-13,15-20 and 23-25* is/are rejected.

7)☐ Claim(s) _ is/are objected to.

8)☐ Claim(s) _ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

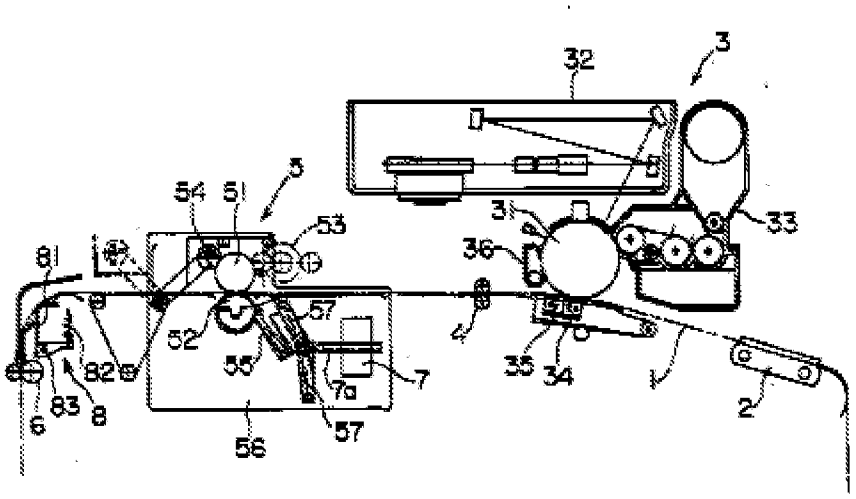
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 8 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakoshi (JP 05053395 A) in view of Abe et al. (JP 62119072 A).

Claims 1, 8 and 17-20

Miyakoshi teaches a continuous paper feeding apparatus (also a printer or a continuous paper feeding apparatus used with an image forming apparatus) for feeding a perforated continuous paper sheet to an image forming device 3, comprising:



a paper supply device configured to supply the continuous paper sheet 1;

a tractor 2 configured provided at a location upstream of said image forming device 3 to feed the continuous paper sheet supplied from said paper supply device while engaging perforations of the continuous paper sheet;

a pair of rollers 4 provided at a location downstream of said image forming device 3 to feed the continuous paper sheet so that a feeding speed of the pair of rollers 4 is slightly higher than that of the tractor 2 (Abstract: "the recording paper 1 is carried in a pulled state between the tractor 2 and the feed roller 4." Inherently, the feeding speed of the pairs of roller 4 is higher than that of the tractor 2).

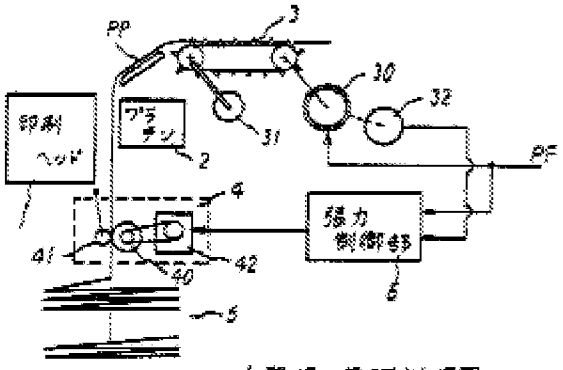
Miyakoshi doesn't teach:

a braking device located between said paper supply device and said tractor 2 and configured to apply a braking force to the continuous paper sheet;

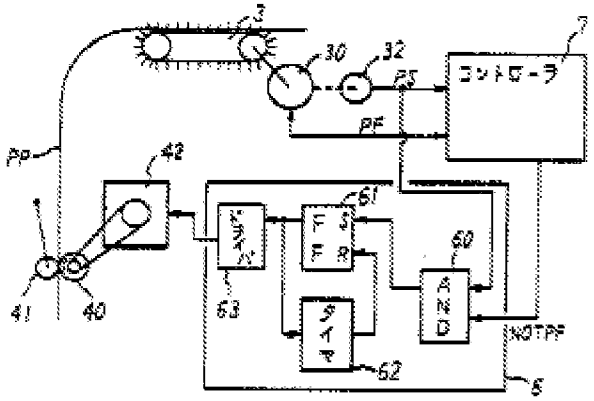
a braking force setting device for variably setting the braking force; and

a controller to control the variable braking force applied by the braking device according to the setting made by said braking force setting.

Abe teaches a printing apparatus capable of absorbing slackening of a perforated continuous paper sheet by providing a braking device 4 disposed between the paper supply device 5 and the tractor 2. The braking device 4 comprises a braking force setting device 42 and a controller 7 to control the braking force (thus provides tension to absorb slackening) to the sheet when a user operates the printing apparatus and the continuous paper sheet is fed (See Abstract).



本発明の原理説明図
第 1 図



第一の実施例の構成図
第 2 図

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to also provide Miyakashi's apparatus with a braking device located between said paper supply device and the tractor 2 and configured to apply a braking force to the continuous paper sheet; a braking force setting device; and a controller to control the braking force, in order to provide tension and absorb slackening of the perforated continuous paper sheet being transported to the image forming device (as taught by Abe).

Note that Miyakashi's apparatus, as modified by Abe, have the combination of all the structures being claimed. Also, the ON/OFF mode of the brake setting as disclosed by Abe is considered to be "variable."

Claim 15:

Miyakoshi as modified teaches a fixing device 5 (Miyakashi's) configured to fix the image onto the continuous paper sheet at a location downstream of said printing device 3.

Claim 16:

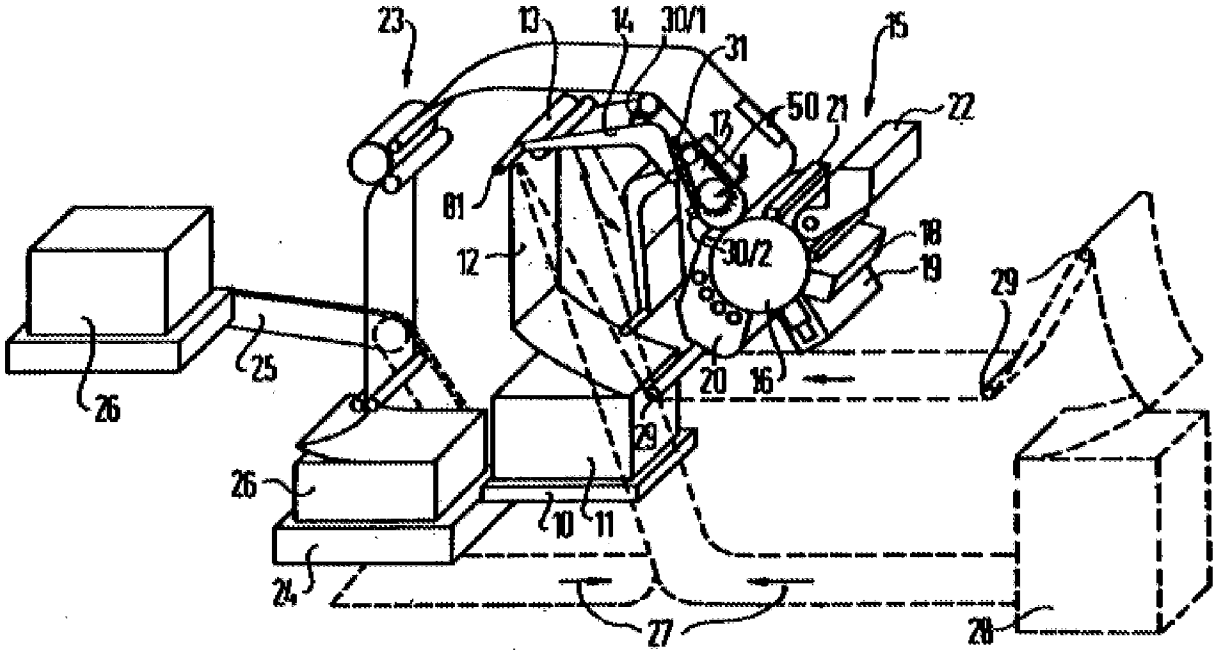
Miyakoshi as modified teaches the fixing device 5 (Miyakashi's) applying tension to the continuous paper sheet (Abstract "the recording paper 1 is carried in a pulled state between the fixing device 5 and the scuff roller 6." Evidently, the fixing device 5 together with the scuff roller 6 applies tension to the recording paper).

Claims 4, 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakoshi in view of Abe et al., and further in view of Rumpel (US 5,350,100).

Miyakoshi as modified by Abe teaches all that is claimed, except for setting the braking force according to a type of the continuous paper sheet.

Rumpel teaches a perforated continuous paper feed device equipped with a tractor (48, 50) located upstream of an image forming device 16, and a paper brake 31 located between the tractor and a paper supply device; wherein "the brake effect is automatically adapted by the thickness of the continuous stationary 12 used. Thus with thin paper, the brake force must not be too large in order, for example, not to tear or stretch the paper. Due to the smaller thickness of the paper, the paper in the paper brake is deflected less and thereby undergoes a smaller braking force. Thicker paper is deflected more and accordingly braked more strongly (Col. 10 lines 15-24)."

FIG 1



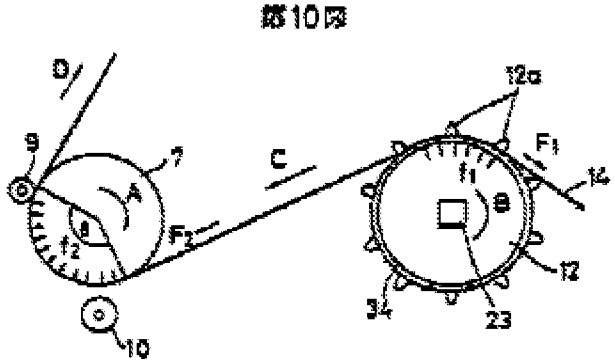
It would have been obvious to one of ordinary skill in the art at the time the present invention was made to set Abe's braking force according to the thickness (i.e. type) of the continuous paper sheet, as taught by Rumpel, to prevent tearing or stretching the paper.

Claims 5, 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakoshi in view of Abe et al., and further in view of Ara Yoji (JP 61094955 A).

Miyakoshi as modified by Abe teaches all that is claimed, except for setting the braking force according to conditions of installation environment.

Ara Yoji, as discussed in previous Office actions, teaches a perforated continuous paper feed device equipped with a tractor 12 which automatically adjusts to create a proper braking force F1 according to conditions of an environment in which the device is installed. As such, the paper is prevented from being fed exceedingly to platen 7 by frictional force F2. In other words, high temperature, high humidity, etc., may cause the paper to be fed exceedingly by frictional

force F2, thus the counter braking force F1 should be adjusted accordingly to prevent any excessive feeding (See Abstract).



It would have been obvious to one of ordinary skill in the art at the time the present invention was made to have Abe's braking force adjusted according to conditions of installation environment, so that the paper is prevented from being fed exceedingly by the frictional force of the feed roller 4 (as taught by Ara Yoji).

Note that Abe's braking device, with its overall structure as is, would be able to absorb slacking of the paper, and at the same time provide the necessary counter braking force to prevent any excessive feeding of the paper by the feed roller 4.

Further, since the counter braking force is adjusted according to various installation conditions, the braking force setting must be variable.

Claims 6, 13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakoshi in view of Abe et al., and further in view of Wassermann (US 3,259,288).

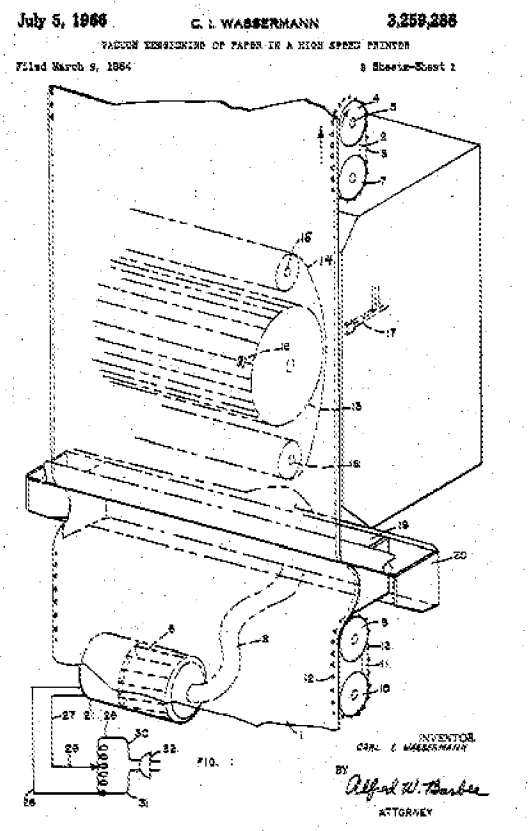
Miyakoshi as modified by Abe teaches all that is claimed, except that the braking device includes an evacuating device.

Wassermann, as discussed in previous Office actions, teaches an evacuation device 19 disposed in a feeding path of a continuous paper which is fed by a tractor to an image forming

device, so that the tensioning of the paper can be easily and accurately controlled, tearing of perforation holes can be prevented, the operation of the printer is greatly simplified, and notably, starting and stopping the paper is smoother (Col. 1 lines 42-70).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to use Wassermann's evacuation device for Abe's braking device, so that the tensioning of the paper can be easily and accurately controlled, tearing of perforation holes can be prevented, the operation of the printing apparatus is greatly simplified, as well as to smooth out the starting and stopping of the paper when a user starts and stops the operation of the apparatus.

Also in light of the teaching above, it would have been obvious to one of ordinary skill in the art to use Wassermann's evacuation device (which variably sets the braking force) as a paper brake anywhere in a continuous paper feeding device with a tractor.



Response to Arguments

Applicant's arguments with respect to claims 1, 8 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to 'Wynn' Q. HA whose telephone number is (571)272-2863. The examiner can normally be reached on Monday - Friday, from 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NQH
March 21, 2008

/Daniel J. Colilla/
Primary Examiner
Art Unit 2854